

# A NEW SPECIES OF GENUS MEIGENIA FROM CHINA (DIPTERA, TACHINIDAE)

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**Abstract** *Meigenia fuscisquama* sp. nov. (Diptera, Tachinidae) from Jilin and Liaoning, China is described and illustrated. The type specimens are deposited in the Institute of Entomology, Shenyang Normal University, China.

**Key words** Diptera, Tachinidae, *Meigenia*, new species, China.

## 1 Introduction

*Meigenia* Robineau-Desvoidy is a genus of the tribe Blondeliini of Exoristinae (Diptera, Tachinidae). Nine species of *Meigenia* were found in the Palaearctic Region (Herting 1993), three in the Oriental Region (Crosskey 1976) and one in the Nearctic Region (O'Hara & Wood 2004) Regions, and six species are found in China (Chao *et al.*, 2001). *Meigenia* is distinguished from the other genera in Blondeliini by the ocellar setae developed, genal height about 0.2 eye height or more, occiput with two irregular rows of black setae behind postocular setae, arista bare, thickened at basal 1/4–1/3; proepisternum hairy; usually 2+2 katepisternal setae; lateral scutellar setae about 0.5 times as long as subapical setae, apical scutellar setae erect, parallel or divergent; abdominal tergites 3 and 4 each with a pair of large black spots (Tschorsnig & Richter, 1998). It is known that species of *Meigenia* are parasitic on Coleopterous larvae of Chrysomelidae and Lepidopterous larvae of Lymantriidae (Shima, 1999; Chao *et al.*, 2001).

In this paper, one species of *Meigenia* from Jilin and Liaoning, China is described as new to science. The specimens used are deposited in the Institute of Entomology, Shenyang Normal University, Shenyang, China (SNUC). Terms follow mainly McAlpine (1981) but that of the male terminalia follows Sinclair (2000).

## 2 Description

*Meigenia fuscisquama* sp. nov. (Figs. 1–8)

**Diagnosis.** Eye covered with dense hairs, vertex 0.12–0.15 head width in male; 2+3 dorsocentral, fore tibia without antero-dorsal seta, mid tibia with 2–3 antero-dorsal setae, lower calypter brownish to brown, abdominal tergites 3 and 4 each with a median black vitta and a pair of discal setae.

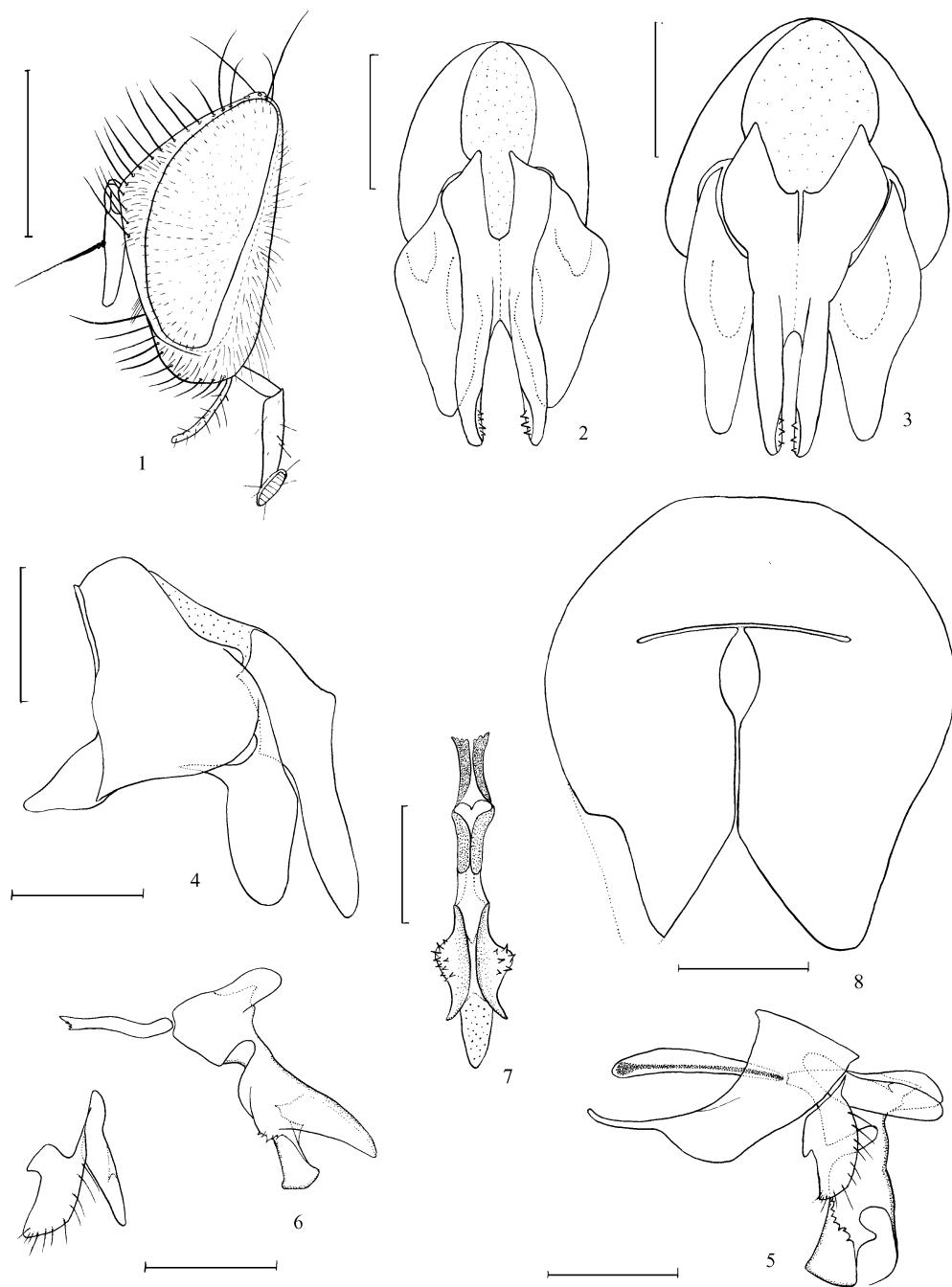
**Male.** Body length 4.5–6.0 mm.

Head black in ground color, frontal vitta black, fronto-orbital plate, parafacilia and gena covered with pale grayish pruinosity; occiput black. Antenna, arista, palpus and prementum black; labella dark brown. Eye densely covered with hairs. Vertex 0.12–0.15 head width

at narrowest point; frontal vitta widened anteriorly, upper portion as wide as fronto-orbital plate; face concave, facial ridge with setae on lower 1/4, lower margin of face not protruding forward; parafacial parallel-sided, nearly as wide as first flagellomere at middle; genal height 0.18–0.30 eye height. Fronto-orbital plate and upper 1/2 of parafacial with black hairs; inner vertical seta well developed, about 0.45 eye height, outer vertical seta hair-like, ocellar seta 0.5–0.7 eye height, about as long as frontal setae; 11–13 frontal setae, lower 8–10 inclinate, the lowest one lower than level of aristal base, upper three reclinate; vibrissa strong, inserted above lower margin of face by length of pedicel; genal seta 0.4–0.5 times as long as vibrissa; occiput densely covered with yellow hairs on upper half except for two irregular rows of black setae behind postocular setae. First flagellomere 1.7–2.2 times as long as pedicel; arista bare, thickened at basal 1/3, pedicel with 6–8 setae, the longest one about as long as pedicel; palpus slender, slightly longer than first flagellomere; prementum about twice as long as wide.

Thorax black, sparsely covered with grayish white pruinosity on scutum and scutellum. Anterior and posterior spiracles brownish black. Prosternum about twice as long as wide, hairy; katepimeron at most with 3–4 hairs; 3 strong postpronotal setae nearly in a line, 3+3 acrostichal setae, 2+3 dorsocentral setae, 1+3 intra-alar setae, 2+2 katepisternal setae; scutellum with 4 pairs of strong marginal and a pair of discal setae, apical setae erect, 0.9–1.2 times as long as scutellum. Lower calypter pale brownish to brown, with short fringe on outer margin.

Wings hyaline, pale brownish, tegula and basicosta black; costal spine shorter than length of cross-vein  $r_m$ , relative lengths of 2nd, 3rd and 4th costal section approximately 1.1: 2.4: 1.0; basal node of vein  $R_{4+5}$  with 1–4 setae dorsally and ventrally; length of vein  $M_{1+2}$  from  $dm+cu$  cross-vein to its bend 1.7–2.4 times as long as distance between bend and wing margin; cell  $r_{4+5}$  narrowly opened at apex. Halter reddish yellow.



Figs 1-8. *Magenia fusasquama* sp. nov. ♂. 1. Male head in profile. 2-3. Cerci and surstyli in dorsal view. 4. Cerci and surstyli in profile. 5. Phallus in profile. 6. Phallus, pregonite and postgonite in profile. 7. Phallus in front view. 8. Sternite 5. Scale bars: 1= 1.0 mm, 2-8= 0.2 mm.

Leg black, claw and pulvillus equal or longer than fifth tarsomere. Fore tibia with 2 posterior setae, at apex 1 dorsal and 1 posteroventral setae; mid tibia with 2 anteroventral (the lower one stronger), 2 posteroventral and 1 ventral setae; hind tibia with 2-3 anteroventral, a row of irregular anteroventral and 3-4 posteroventral setae, and at apex 1 dorsal, 1 anteroventral and 1 posteroventral setae.

Abdomen ovoid, black in ground color, covered with gray pruinosity on anteroventral 1/5 of tergite 3, anteroventral 1/4 1/2 of tergite 4, and almost tergite 5

and lateroventral surfaces of tergites; syntergite 1+2 almost black, tergites 3 and 4 each with a median black vitta and two large lateral black spots, sometimes merged. Abdominal syntergite 1+2 concave to its posterior margin, with 2 median marginal and 1 lateral marginal setae; tergite 3 with 2 median marginal, 2 discal and 1 lateral marginal setae; tergite 4 with a row of marginal and 2 discal setae; tergite 5 separately with a row of marginal and discal setae. Median cleft of sternite 5 deep, about 0.7 length of the sternite, posterior lobe bluntly round apically.

Male terminalia. In dorsal view cerci black, slender and narrowed at apical half and with 3 or 4 tooth-like process at apical inner-lateral surface; surstyli flat and straight, covered with thickly black long hairs and bluntly round at apex. Pregonite short, bent downward, with about 10 setulae on dorsal margin in profile.

Female. Conspicuously differing from male as follows: body densely covered with gray pruinosity; vertex about 0.33 head width; frontal vitta at middle slightly narrower than fronto-orbital plate; gena about 0.33 eye height; outer vertical seta distinct, about 0.45 length of inner vertical seta, inner vertical seta strong, about 0.82 eye height, 2 proclinate orbital setae, which about as long as outer vertical seta; 7 inclinate frontal setae, claw and pulvillus shorter than fifth tarsus; mid tibia with 2-4 antero-dorsal (two strong), 1 postero-dorsal and 1 ventral setae; abdominal tergites 3 and 4 each with a pair of triangular black spots.

Remarks. This new species is closely related to *M. tridentata* Mesnil from China and Far East of Russia, but it is distinguished from the latter in having wholly black antennae, first flagellomere 1.7-2.2 times as long as pedicel; 2+3 dc, fore tibia without ad, mid tibia with 2 ad setae; tergite 3 and 4 each with a pair of discal setae; cerci and surstyli bluntly rounded at apex in dorsal view.

Holotype ♂, China, Mt. Changbai, 400-1700 m, Jilin, 11 Aug. 2004, ZHANG Dong and WANG Rong Rong. Paratypes, China, 10 ♂♂, 15 ♀♀, same as holotype; same place and date, 7 ♂♂, XUE Wair Qi and WANG Ming Fu, 5 ♂♂, 1 ♀, ZHANG Chur Tian; 1 ♂, Mt. Changbai, 8 July 1998, XUE Wair Qi; 1 ♂, No record, Benxi, Liaoning; 2 ♂♂, Xigou, Qinghecheng, 14 June 1976, XUE Wair Qi; 2 ♂♂, Xiaosiping, 3 June 1989, ZHANG Chur Tian; 1 ♂, Yanghugou, 2 June 1989, ZHANG Chur Tian; 1 ♂, Nandian, 23 May 1973, XUE Wair Qi; 1 ♂, Mt. Tiecha, 14 July 1964, XUE Wair Qi; 1 ♀, Tanggou, 600-1235 m, 1-3 Aug. 2004, ZHANG Chur Tian; 1 ♀, Mt. Laotuding, 1000-1325 m, Huanren, 6-7 July 1997, ZHANG Chur Tian.

Etymology. The specific name is derived from Latin

*adjective* *fuscus* (= brown) plus noun *squama* (= scale), in reference to one of the diagnostic characters of this species, lower calypter pale brownish to brown.

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## REFERENCES

Chao, G.M. et al. 2001. Fauna Sinica. Insecta. Vol. 23 Diptera: Tachinidae (I). Science Press, Beijing. 1-305.

Crosskey, R. W. 1976. A taxonomic conspectus of the Tachinidae (Diptera) of the Oriental Region, *Bulletin of The British Museum (Natural History)*. Entomology Supplement, 26, London. 357pp.

Herting, B. and Dely-Draskovits, Á. 1993. Family Tachinidae. pp. 118-458. In: Soos, A. and Papp, L. (eds.), Catalogue of Palaearctic Diptera. Vol. 13. Anthomyiidae-Tachinidae. Hungarian Natural History Museum, Budapest. 624 pp.

McAlpine (1981) Morphology and Terminology adults. In: McAlpine, et al. (eds.), Manual of Nearctic Diptera, Biosystematics Research Institute, Ottawa, Ontario. 1: 9-63.

Mesnil, L. P. 1944-1975. 64g. Larvaevoinae (Tachininae), Blondelina pp. 645-773. In: Lindner, 1975. E. Die Fliegen der Palaearktischen Region. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart. pp. 88-1435.

Richter, V. A. 2004. Tachinidae. In: Lera, P. A. (ed.), Key to the Insects of Russian Far East, 6, Diptera and Siphonaptera. (3): 148-398 (in Russian).

Shima, H. 1999. Host parasite Catalog of Japanese Tachinidae. Fukuoka, Japan: Makunagi/Acta Dipterologica, Supplement 1, 108 pp.

Sinclair, B. J. 2000. 1-2. Morphology and Terminology of Diptera Male Terminalia. In: Papp, L. and Darvas, B. (eds.), Contribution to a Manual of Palaearctic Diptera (with special reference to flies of economic importance). Vol. 1. General and Applied Dipterology. Science Herald, Budapest. 53-74.

Townsend, C. H. 1940. Fauna Sumatrensis, Diptera Muscoidae, Supplementa Entomologica X, 135-136.

Tschoisnig, H. P. and Richter, V. A. (1998) Family Tachinidae. In: Papp, L. and Darvas, B. (eds.), Contributions to a Manual of Palaearctic Diptera (with special reference to flies of economic importance). Volume 3. Higher Brachycera. Science Herald, Budapest. pp. 69-827.

## 美根寄蝇属一新种记述(双翅目, 寄蝇科)

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**摘要** 美根寄蝇属隶属于追寄蝇亚科卷蛾寄蝇族, 主要分布在古北区、东洋区和新北区, 中国已知6种。记述采自我国吉林长白山和辽宁本溪的1新种, 棕瓣美根寄蝇 *Magenia fusisquama* sp. nov., 与三齿美根寄蝇的区别在于背中鬃2+3,

**关键词** 双翅目, 寄蝇科, 美根寄蝇属, 新种, 中国.

中图分类号 Q969.453.5

前胫无前背鬃, 中胫具2根前背鬃, 第3、4背板各具1对中鬃, 雄肛尾叶和侧尾叶端部均较钝圆。新种模式标本保存在沈阳师范大学昆虫研究所。